Sprint Wholesale CPE Fraud Detect[SM]

Basic Features:
- ➤ Traffic monitoring — A service that monitors CPE toll-free traffic and CPE outbound international business traffic
- ➤ Comprehensive — CPE includes PBX, Centrex, automatic call distributors, automatic attendants, call diverters and direct inward system access

Applications:
- ➤ CPE to Sprint – Business traffic on dedicated access lines installed between an end-user's CPE and a Sprint switch.
- ➤ Switched Access – Business traffic on dedicated access lines installed between an end-user's CPE and a Sprint switch that overflows to switched access lines.
- ➤ Network – CPE business traffic PIC'd to a reseller is carried on the Sprint network.

Services:
- ➤ 800/888 – All business domestic and international toll free inbound 800 or 888 traffic.
- ➤ Outbound international – All business international outbound traffic, including traffic to the Caribbean area (809 et al.)

Benefits:
- ➤ Notification – Stop abnormal traffic patterns as they start.
- ➤ Selective Analysis – Analyze all outbound international calls to every country in the world, including area code 809. This service is also available for inbound domestic toll free and inbound international toll free services.
- ➤ Comprehensive daily fraud analysis – Calls are monitored and analyzed 24 hours a day, 365 days per year.
- ➤ Bulletins – Distributed on a quarterly basis provide subscribers with current telecommunication fraud information and helpful suggestions to avoid becoming a victim

For more information about Sprint Wholesale Single Source Solutions,[SM] talk to your account team today or call 1-800-788-3240. Visit Sprint Wholesale on the Internet: www.sprintbiz.com/wsg

Sprint Wholesale   Reliability and responsiveness from a single source[SM]

Sprint.

METRO SONET

SONET reliability to the customer premises.
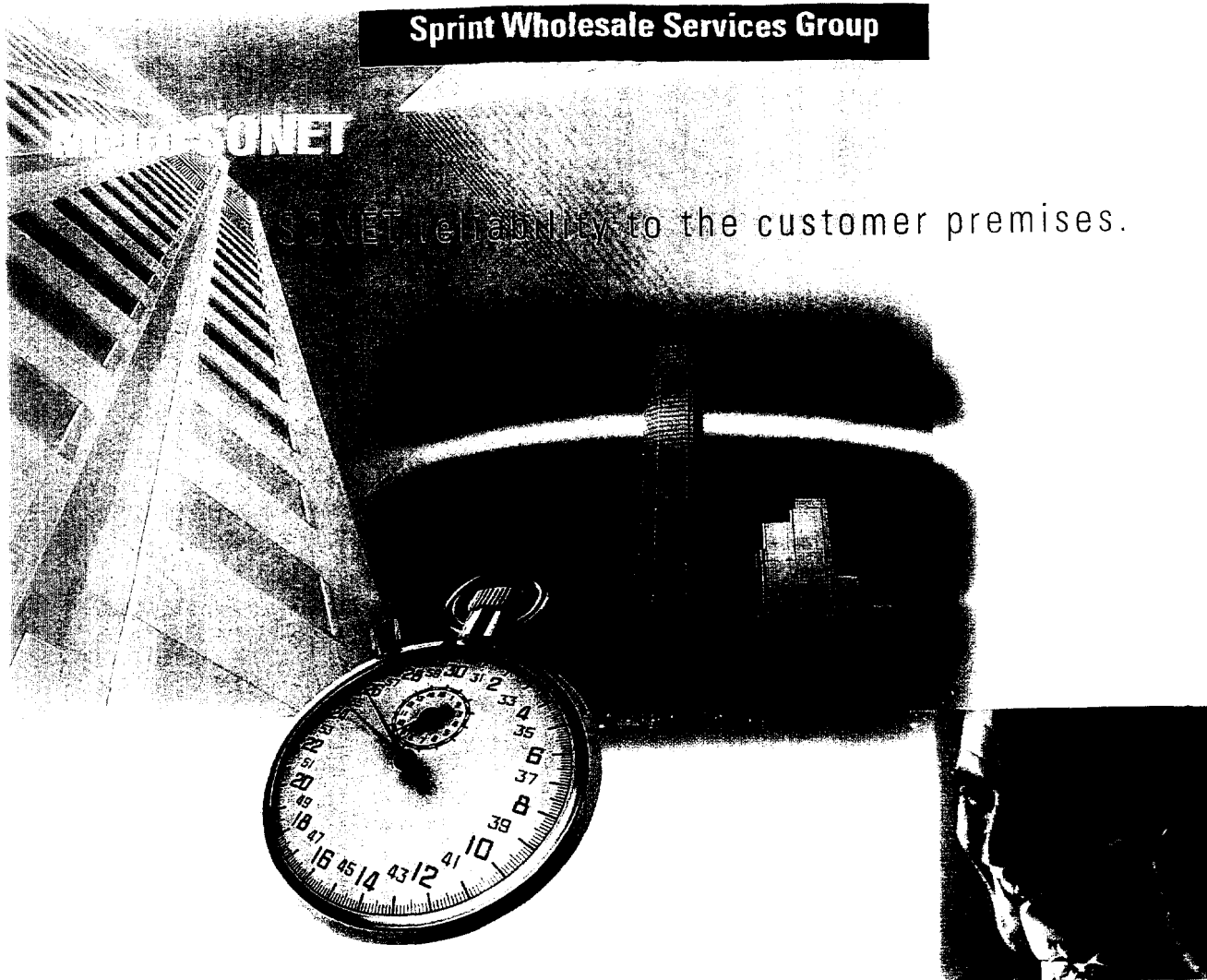
Metro SONET uses high-speed SONET rings to provide self-healing capabilities from Sprint's core network to customer premises.

Sprint.

Reliability
➤ Self-healing capabilities extended to customer premises.

Responsiveness
➤ Available to all customers in a Metro SONET service area.
➤ Accommodates higher speeds, more dynamic switching and greater intelligence.

Single Source
➤ Available directly from Sprint.

100% SONET ring-based access service

Self-healing

Millisecond response time

No additional cost

Reliability and responsiveness from a single source

Metro SONET Customers:

- Every customer in a Metro SONET service area who uses Sprint service.

Metro SONET Access:

- Customers located directly on SONET rings have SONET survivability directly to their doorstep with T1 access.
- Customer provided access requires specific LEC SONET tariff.
- Metro SONET is a collaborative effort between local telephone companies and other local access providers.

Advantages of Metro SONET:

- Survivability – Administers inter-office self healing capabilities.
- Cost Efficient – Reduces the need for redundant circuits, CPE, and vendors.
- Flexible – Offers you the ability to customize and migrate applications.
- Consistent – Managed by a single-source provider.

Benefits of Metro SONET:

- 100% SONET service – one of the highest levels of survivability in the market today.
- Fast restoration – service is restored in milliseconds, not minutes.
- Convenient conversion – existing customers are converted between midnight and 7:00 a.m. to avoid disruption of service.

Metro SONET Availability:

- Metro SONET will be rolled out across the United States over the next few years. Please consult your account team for specific roll-out schedule.

Metro SONET service

POP   POP

High Speed
SONET Ring

Collector Ring   Collector Ring
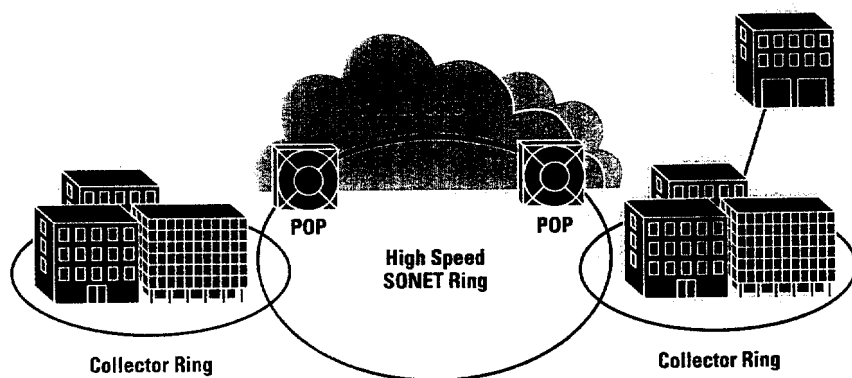
Sprint Wholesale Services Group

Reliability and responsiveness from a single source

Wholesale

Reliability and responsiveness from a single source

Sprint

WHOLESALE
SOLUTIONS

UNITED STATES NETWORK MAP

W RLD
COM

Bismarck

Butte

Salt Lake City

Denver

San Francisco

Albuquerque   Amarillo   Oklahoma

Phoenix

El Paso

Austin

Honolulu   San A
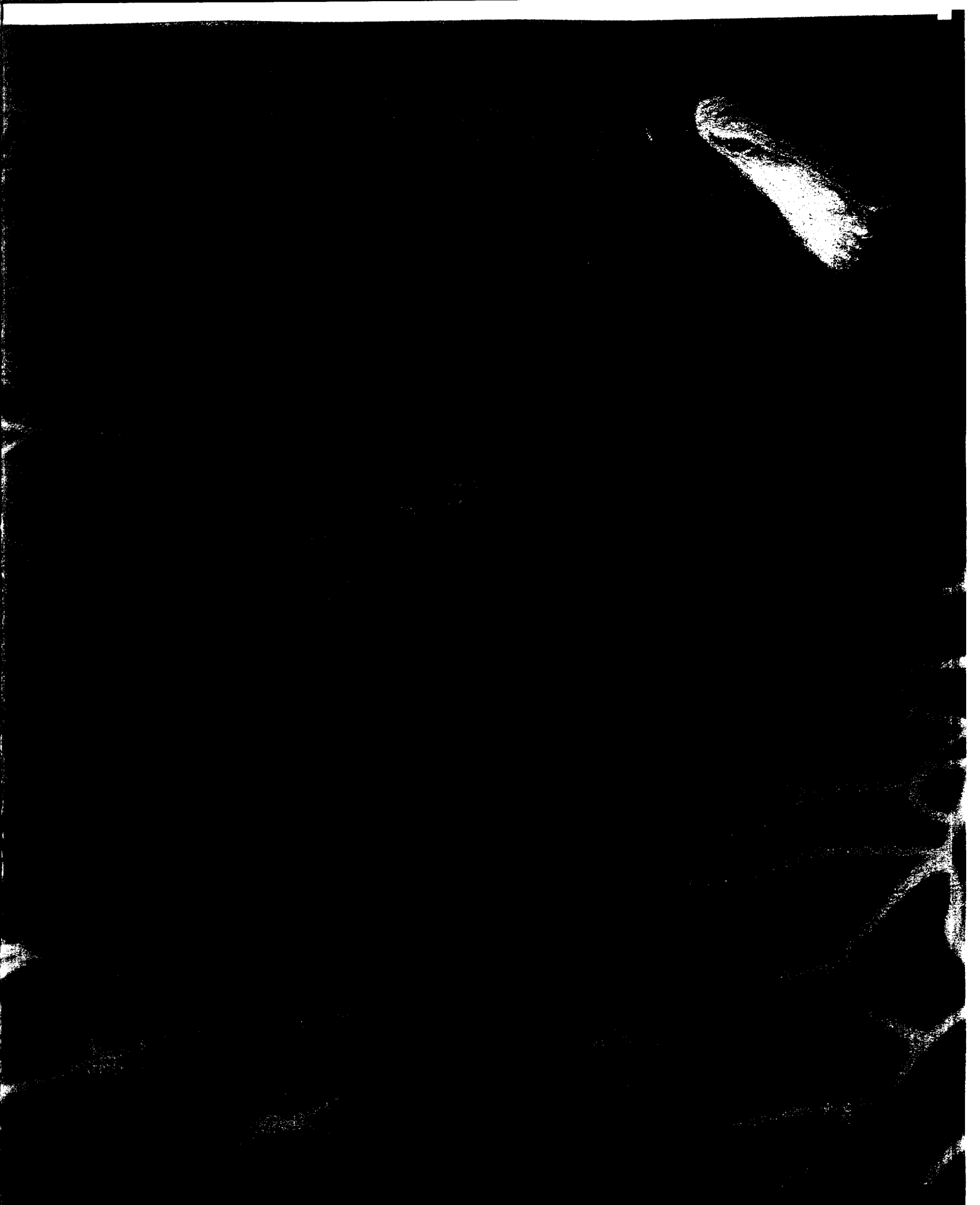
Owned Fiber, Digital Microwave   International Voice Gateways

Leased Fiber. Digital Microwave   Voice Switches

Expansion In Progress   Voice Switches – Planned 1998

W RLD
COM.

UNITED STATES NETWORK MAP

Bangor

Minneapolis

Boston

Detroit Buffalo Albany

Des Moines

Cleveland Newark

New York City

Chicago Philadelphia

Riverdale

Indianapolis Washington, DC

Kansas City St. Louis

Tulsa

Nashville Charlotte

Little Rock

Dallas Atlanta

Jackson Savannah

Shreveport

Jacksonville

New Orleans

Houston

Tampa

Fort Lauderdale
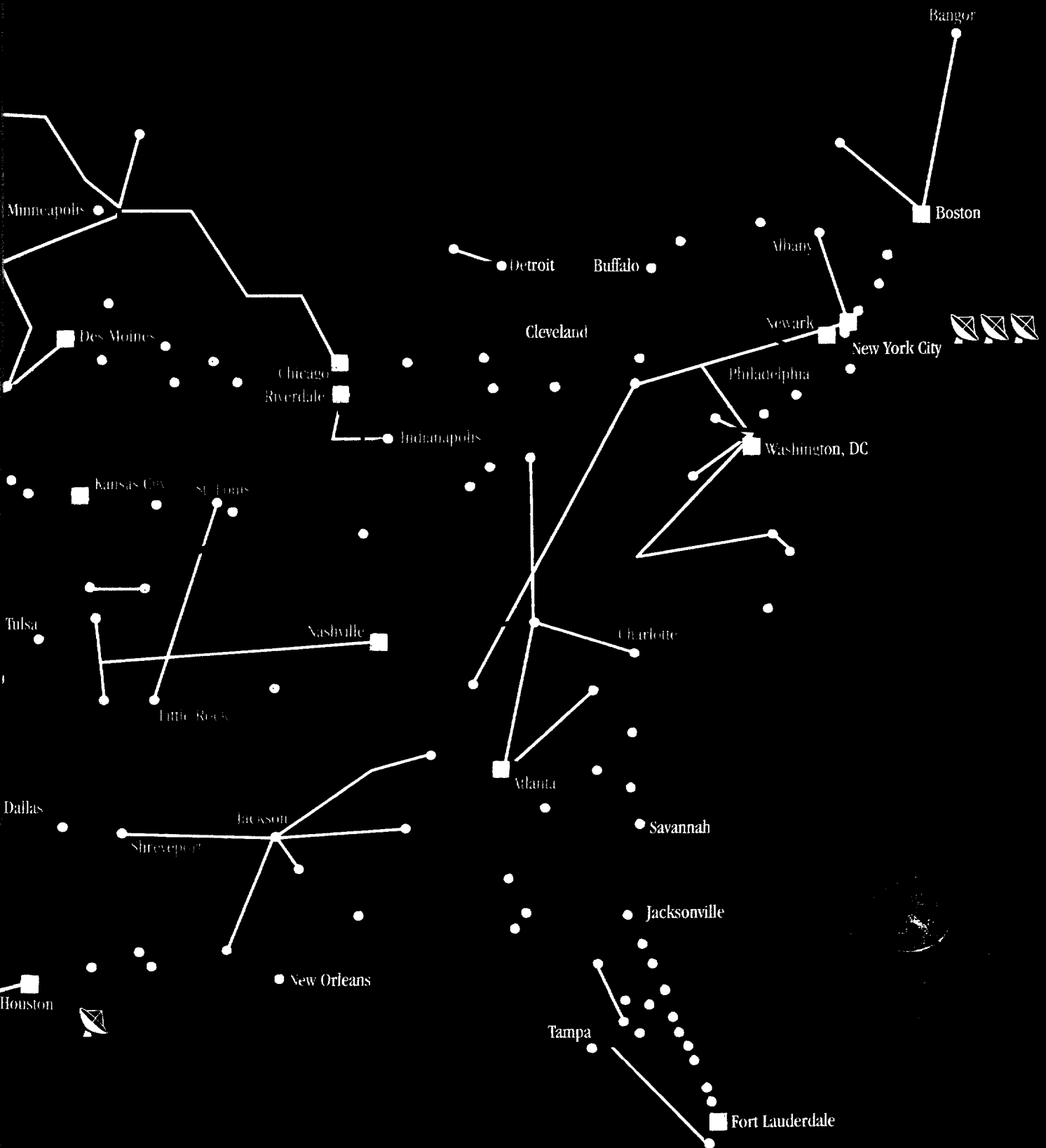
WORLDCOM

WorldCom is the leading provider of telecommunications products and network transmission to alternative long distance providers.

WorldCom has played a major role in changing the wholesale business. Many WorldCom technological and product innovations have become industry standards.

We were the first major carrier to offer a comprehensive line of switched and private line services dedicated to the wholesale industry. We were also leaders in providing broadband and Internet services for resale.
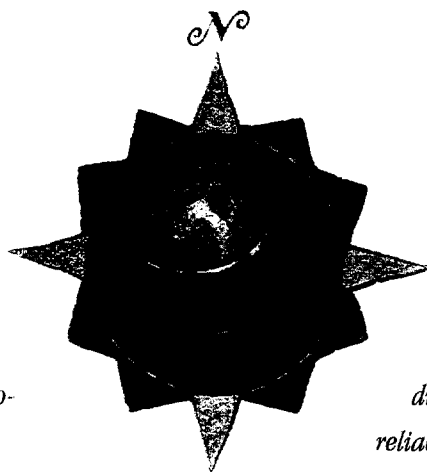
WorldCom's commitment to the wholesale industry is also exemplified by a full array of support services, including the fastest electronic provisioning systems in the industry.

Providing the foundation for our products are worldwide owned and operated local, long distance and Internet networks that offer the reliable transmission and competitive pricing your business depends on, day after day.

WorldCom's mission is to continue providing the highest-quality transmission, the most dependable service, and the most complete set of products at a competitive price.

Company

- More than 500 wholesale customers worldwide.
- More than 500,000 business customers nationwide.
- More than 200 offices worldwide.
- More than 13,000 employees worldwide.
- A *Fortune* 500 company.
- Annual revenue approaching $6 billion.

Domestic and International Facilities

- 20,000 route miles of owned US long distance fiber.
- 4,000 miles of owned US long distance digital microwave.
- Worldwide satellite coverage:
  - More than 80 transmit/receive earth stations.
  - More than 25 international dedicated gateway earth stations.
- More than 200 international service agreements.

- State-of-the-art owned SONET/SDH local fiber networks:
  - More than 60 major US markets.
  - 6 key foreign financial markets: Amsterdam, Brussels, Frankfurt, London, Paris and Stockholm.
- Local operations in major international markets: Hong Kong, Milan, Tokyo, Toronto and Zurich.
- Local points of presence in major international markets: Montreal, Sydney, Taipei and Vancouver.
- More interconnection agreements with US local exchange carriers than any other local access entrant.
- More than 1,000 Internet access points of presence worldwide.
- Long-term capacity in virtually every undersea fiber cable.
- Owned and operated pan-European cable systems integrating key markets.
- Transatlantic cable system completed first quarter 1998.

Technological Leadership

- Introduced the first:
  - Public frame relay service.
  - International ATM service.
  - National ATM network.
  - Fractional T-1 service.
  - Switched DS-3 service.
  - Bandwidth-on-command service.
  - Proactive ESF DS-1 performance-monitoring service.

Industry Leadership

- The largest supplier of international private line services in the US.
- America's largest provider of overseas private line networks.
- One of the largest providers of Internet services.
- First to receive permission to build local networks in France and Germany.
- One of the first to receive permission to build a pan-European network.

DS-0 Service

DS-0 Service is a full-duplex, dedicated digital private line service with a transmission rate of either 56 or 64 Kbps.

DS-0 Service may utilize digital or analog DS-0 local loops.

Applications

- Voice tie lines or intermachine trunks.
- Foreign exchange (FX or Feature Group A) circuits.
- Feature Groups B and D circuits: uniform numbers (950 and 10XXX).
- Full-duplex digital voice and low-speed data at speeds of 2.4, 4.8, 9.6, 14.4, 19.2, 56 and 64 Kbps.

Features

- 56 or 64 Kbps transmission speed is compatible with Bellcore and other industry standards.
- Premises-to-premises availability measured over 12 consecutive months: 99.95%.
- Premises-to-premises Error-Free Seconds (EFS) measured over 24 consecutive hours: 99.97%.
- Mean Time To Repair (MTTR) objective of three hours.
- WorldCom uses the latest in Synchronous Optical Network (SONET) technology to maximize transmission-signal quality and network management efficiency.

- Our customer service center in Tulsa is dedicated to wholesale services, operating 24 hours a day, 365 days per year so you always have assistance when you need it.
- Customized billing options allow you to receive your invoice in a format that makes the most sense for the way you manage your business.

Options

- Multipoint and/or multidrop bridging.
- Echo cancellation.
- 2- or 4-wire connections.
- Analog or digital local access.
- Type C and D line conditioning.
- DTMF and pulse signaling.
- Electrical and geographic diverse routing.

WORLD COM

DS-0 Service

VOICE TIE LINE, INTERMACHINE TRUNK (IMT)

CARRIER
POP

DIGITAL
NETWORK

CARRIER
POP

DS-0 ACCESS   DS-0 IXC   DS-0 ACCESS

NETWORK   WORLDCOM   WORLDCOM   NETWORK
SWITCH   POP   POP   SWITCH

FOREIGN EXCHANGE (FX) OR FEATURE GROUP (FG) SERVICE

CARRIER
POP

DIGITAL
NETWORK

FEATURE
GROUP
TANDEM

LOCAL
CALLING
AREA

DS-0 ACCESS   DS-0 IXC

NETWORK   WORLDCOM   LEC CO
SWITCH   POP   FGA, B OR D ACCESS
                                   (SWITCHED ACCESS)
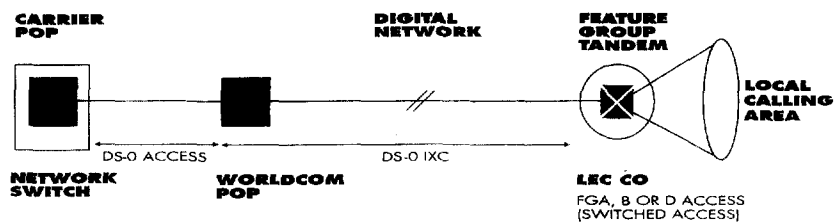
DS-1, Fractional DS-1 Services

DS-1 Service is a full-duplex, dedicated digital private line service with a transmission rate of 1.544 Mbps. DS-1 Service may be used as a single, contiguous signal or as 24 separate DS-0 (64 Kbps) channels. DS-1 Service utilizes either a DS-1 local loop or collocation.

Fractional DS-1 Service is a full-duplex, dedicated digital private line service consisting of multiple DS-0 channels up to a full DS-1. Fractional DS-1 Service utilizes either a DS-1 local loop or collocation.

Applications

- Bulk voice and/or data transmission.
- High-speed tie lines or intermachine trunks.
- High-speed trunking for foreign exchange or feature group services.
- High-speed trunking for exchange of traffic with other carriers.

Features

- Compatible with Bellcore and other industry standards for DS-1 and Fractional DS-1 private line services.
- Premises-to-premises availability measured over 12 consecutive months:
  - DS-1 – 99.96%
  - Fractional DS-1 – 99.95%
- Premises-to-premises Error-Free Seconds (EFS) measured over 24 consecutive hours:
  - DS-1 – 99.99%
  - Fractional DS-1 – 99.99%
- Mean Time To Repair (MTTR) objective:
  - DS-1 – 2 hours
  - Fractional DS-1 – 2 hours

- WorldCom uses the latest in Synchronous Optical Network (SONET) technology to maximize transmission-signal quality and network management efficiency.
- Our customer service center in Tulsa is dedicated to wholesale services, operating 24 hours a day, 365 days per year so you always have assistance when you need it.
- Customized billing options allow you to receive your invoice in a format that makes the most sense for the way you manage your business.
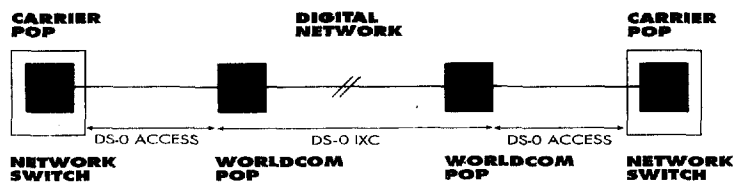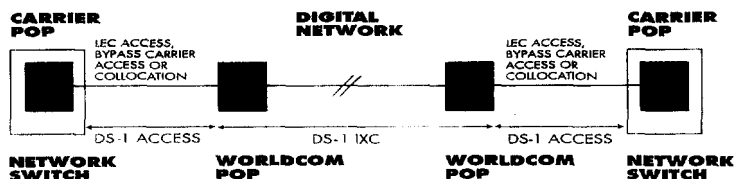
Service Options

- Local loop coordination.
- Collocation.
- DS-1 interconnection.
- DS-1 to DS-0 multiplex service (at LEC central office).
- Digital Cross-connect Service (DCS).
- Echo cancellation.
- SF or ESF formatting.
- AMI or B8ZS line coding.
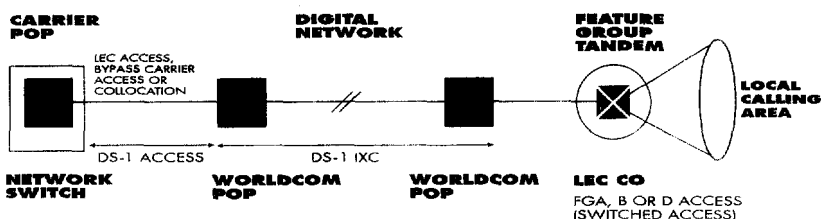- Electrical or geographical diverse routing.
- DS-1/DS-0 drop and insert.
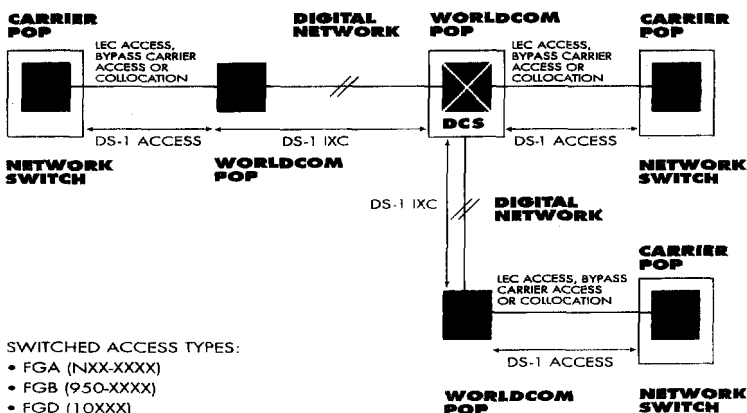
WORLDCOM

DS-1, Fractional DS-1 Services

P R I V A T E   L I N E   S E R V I C E S

DS-1 POINT-TO-POINT CONFIGURATION

CARRIER POP		DIGITAL NETWORK			CARRIER POP
	LEC ACCESS, BYPASS CARRIER ACCESS OR COLLOCATION			LEC ACCESS, BYPASS CARRIER ACCESS OR COLLOCATION	
	DS-1 ACCESS	DS-1 IXC		DS-1 ACCESS	
NETWORK SWITCH		WORLDCOM POP		WORLDCOM POP	NETWORK SWITCH

DS-1 FOREIGN EXCHANGE (FX) OR FEATURE GROUP (FG) CONFIGURATION

CARRIER POP		DIGITAL NETWORK		FEATURE GROUP TANDEM
	LEC ACCESS, BYPASS CARRIER ACCESS OR COLLOCATION			LOCAL CALLING AREA
	DS-1 ACCESS	DS-1 IXC		
NETWORK SWITCH	WORLDCOM POP	WORLDCOM POP	LEC CO FGA, B OR D ACCESS (SWITCHED ACCESS)	

DS-1 DROP AND INSERT CONFIGURATION WITH 1/0 DCS

CARRIER POP		DIGITAL NETWORK	WORLDCOM POP		CARRIER POP
	LEC ACCESS, BYPASS CARRIER ACCESS OR COLLOCATION			LEC ACCESS, BYPASS CARRIER ACCESS OR COLLOCATION	
	DS-1 ACCESS	DS-1 IXC	DCS	DS-1 ACCESS	
NETWORK SWITCH		WORLDCOM POP			NETWORK SWITCH

DS-1 IXC — DIGITAL NETWORK

CARRIER POP

LEC ACCESS, BYPASS CARRIER ACCESS OR COLLOCATION

DS-1 ACCESS

WORLDCOM POP   NETWORK SWITCH

SWITCHED ACCESS TYPES:
- FGA (NXX-XXXX)
- FGB (950-XXXX)
- FGD (10XXX)

FRACTIONAL DS-1 POINT-TO-POINT CONFIGURATION

CARRIER POP		DIGITAL NETWORK			CARRIER POP
	LEC ACCESS, BYPASS CARRIER ACCESS OR COLLOCATION			LEC ACCESS, BYPASS CARRIER ACCESS OR COLLOCATION	
	DS-1 ACCESS	MULTIPLE DS-0 CHANNELS		DS-1 ACCESS	
NETWORK SWITCH	WORLDCOM POP		WORLDCOM POP		NETWORK SWITCH
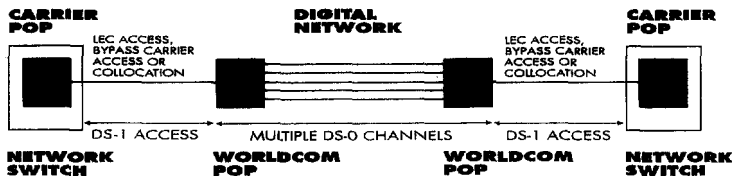
FRACTIONAL DS-1 SERVICE MAY BE USED TO ACCOMMODATE OTHER CONFIGURATIONS

DS-3, Fractional DS-3 Services

DS-3 Service is a full-duplex, dedicated digital private line service with a transmission rate of 44.736 Mbps. DS-3 Service may be used as a single, contiguous signal or as 28 separate DS-1 (1.544 Mbps) channels. DS-3 Service utilizes either a DS-3 local loop or collocation.

Fractional DS-3 Service is a full-duplex, dedicated digital private line service consisting of multiple DS-1 channels up to a full DS-3. Fractional DS-3 Service utilizes either a DS-3 local loop or collocation.

Applications

- High-volume voice and/or data transmission.
- High-speed tie lines or intermachine trunks.
- High-speed trunking for feature group services.
- High-speed trunking for exchange of traffic with other carriers.
- Videoconferencing or broadcast.

Features

- Compatible with Bellcore and other industry standards for DS-3 and Fractional DS-3 private line services.
- Premises-to-premises availability measured over 12 consecutive months:
  - DS-3 – 99.97%
  - Fractional DS-3 – 99.96%
- Premises-to-premises Error-Free Seconds (EFS) measured over 24 consecutive hours:
  - DS-3 – 99.95%
  - Fractional DS-3 – 99.95%
- Mean Time To Repair (MTTR) objective:
  - DS-3 – 1 hour
  - Fractional DS-3 – 2 hours

- WorldCom uses the latest in Synchronous Optical Network (SONET) technology to maximize transmission-signal quality and network management efficiency.
- Our customer service center in Tulsa is dedicated to wholesale services, operating 24 hours a day, 365 days per year so you always have assistance when you need it.
- Customized billing options allow you to receive your invoice in a format that makes the most sense for the way you manage your business.
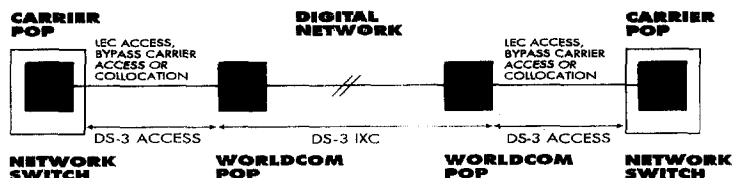
Service Options

- Local loop coordination.
- Collocation.
- DS-3 interconnection.
- DS-3 to DS-1 multiplexing.
- DS-3/DS-1 drop and insert.
- Electrical or geographical diverse routing.
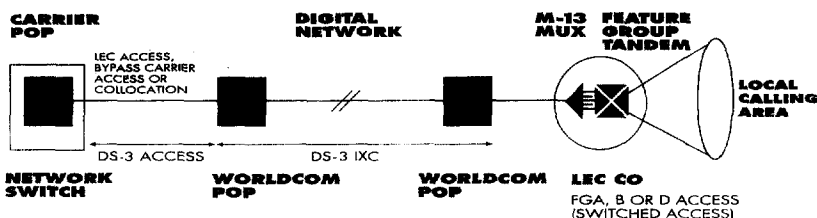- AMI or B8ZS line coding.
- Echo cancellation.

W RLD COM

DS-3, Fractional DS-3 Services
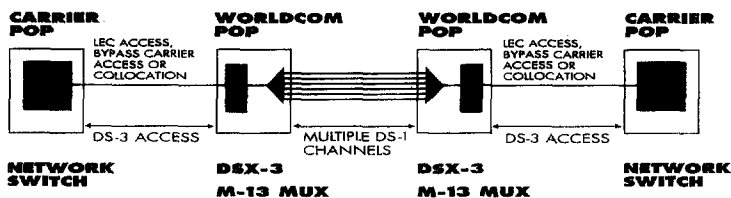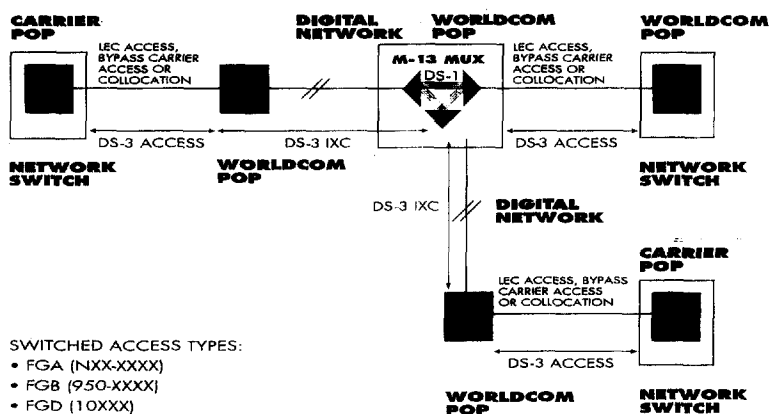
PRIVATE LINE SERVICES

DS-3 POINT-TO-POINT CONFIGURATION

DS-3 FOREIGN EXCHANGE (FX) OR FEATURE GROUP (FG) CONFIGURATION

DS-3 DROP AND INSERT CONFIGURATION WITH M-13 MUX

SWITCHED ACCESS TYPES:
- FGA (NXX-XXXX)
- FGB (950-XXXX)
- FGD (10XXX)

FRACTIONAL DS-3 SERVICE MAY BE USED TO ACCOMMODATE OTHER CONFIGURATIONS.

Frame Relay Service — Resale Program

The Frame Relay Service Resale Program offers you the opportunity to provide branded frame relay service to your customers.

Frame Relay Service is a data communications interface standard for wideband packet-switching. It provides the transmission of variable-length packets across a digital virtual private network. The packets can access the network at port-connection speeds of 56 Kbps to 1.984 Mbps.

Frame Relay Service operates within the WorldCom Data Concourse, a broadband platform which accommodates interworking between cell- and packet-based technologies.

WorldCom introduced the world's first public frame relay transmission service in 1991.

Applications

- LAN-to-LAN communication.
- System Network Architecture (SNA) connectivity.
- Remote database access.
- Real-time file transfer and updates.
- Image transfer.
- Document and resource sharing.
- Sales and order entry.
- Customer service.
- Field service.

Features/Benefits

- *Automatic alternate routing of Permanent Virtual Circuits (PVCs) between WorldCom Points of Presence (POPs)* increases network availability and reliability.
- *A single interface into WorldCom Frame Relay service* supports multiple logical connections, reducing expense for local access and Customer Premises Equipment (CPE).
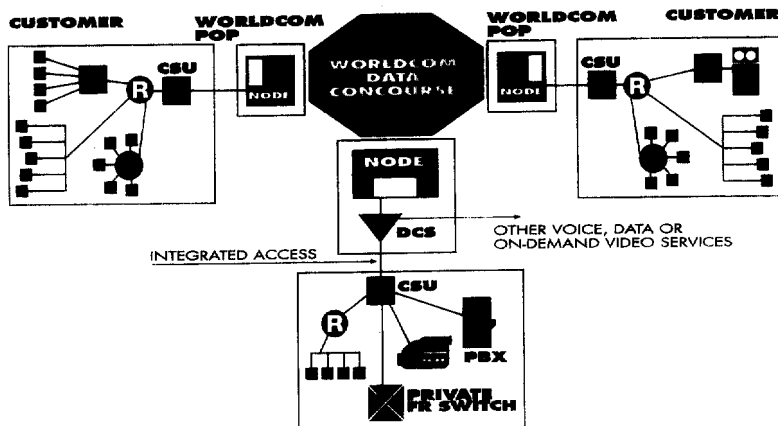
- *Dynamic bandwidth allocation* improves overall network performance and allows for more efficient use of network capacity.
- *Oversubscription* allows customers to take advantage of the bursty nature of data transactions, increasing network efficiency through greater connectivity.
- *Virtual connectivity* provides the ability to rapidly reengineer and reconfigure network connectivity.
- *Flat monthly fee (pricing that is not usage- or mileage-sensitive)* improves price/performance for data networks and provides predictable monthly costs for easier budgetary planning.

Options

- PVCs provide logical connectivity between port connections. Each PVC is assigned a Committed Information Rate (CIR) in increments of 16 Kbps (up to 64 Kbps) and 64 Kbps (up to 1.024 Mbps).

w🌐RLD COM.

Frame Relay Service – Resale Program

Frame Relay Service — Agent Program

B R O A D B A N D   S E R V I C E S

A special program enables you to offer your customers the premier frame relay technology through an agent agreement with WorldCom.

Frame Relay Service is a data communications interface standard for wideband packet-switching. It provides the transmission of variable-length packets across a digital virtual private network. The packets can access the network at port-connection speeds of 56 Kbps to 1.984 Mbps.

Applications

- LAN-to-LAN communication.
- System Network Architecture (SNA) connectivity.
- Remote database access.
- Real-time file transfer and updates.
- Image transfer.
- Document and resource sharing.
- Sales and order entry.
- Customer service.
- Field service.

Features/Benefits

- *Automatic alternate routing of Permanent Virtual Circuits (PVCs) between WorldCom Points of Presence (POPs)* increases network availability and reliability.
- *A single interface into WorldCom Frame Relay service* supports multiple logical connections, reducing expense for local access and Customer Premises Equipment (CPE).
- *Dynamic bandwidth allocation* improves overall network performance and allows for more efficient use of network capacity.

- *Oversubscription* allows customers to take advantage of the bursty nature of data transactions, increasing network efficiency through greater connectivity.
- *Virtual connectivity* provides the ability to rapidly reengineer and reconfigure network connectivity.
- *Flat monthly fee (pricing that is not usage- or mileage-sensitive)* improves price/performance for data networks and provides predictable monthly costs for easier budgetary planning.

Options

- PVCs provide logical connectivity between port connections. Each PVC is assigned a Committed Information Rate (CIR) in increments of 16 Kbps (up to 64 Kbps) and 64 Kbps (up to 1.024 Mbps).
- Disaster-recovery service provides cost-effective network access to a redundant data site.
- Internet access: E-mail, FTP, Telnet, etc.

WORLDCOM

Frame Relay Service – Agent Program
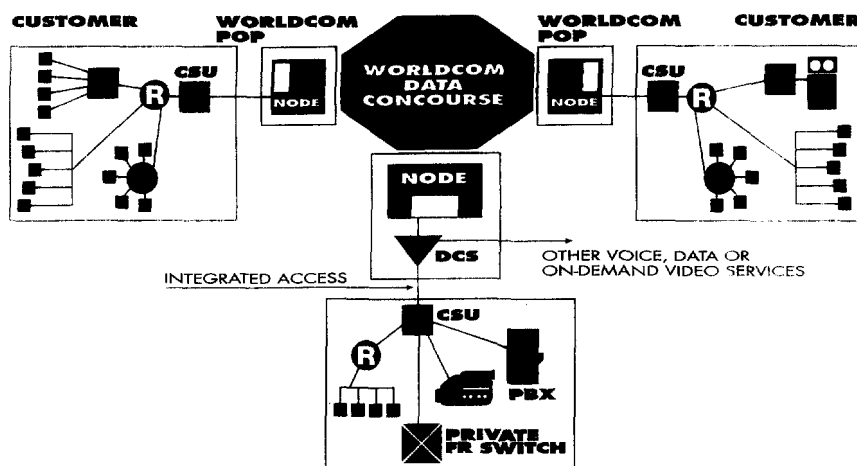
Frame Relay Service Agent Program Details
Features/Benefits

- **Attractive commissions.** You can earn up to 15% on monthly WorldCom Frame Relay service charges for the length of your contract. You will receive commissions as long as the service is active throughout the term of your agreement.

- **Customer retention.** Because of the technical nature of frame relay, end users tend to remain loyal to their vendors.

- **WorldCom brand equity.** We introduced the first public frame relay service in March 1991. Our frame relay technology, engineering capabilities and provisioning expertise continue to be recognized as industry leaders.

- **WorldCom support.** You'll have all of the help you need in building your WorldCom Frame Relay customer base, including:
  - **Engineering.** WorldCom systems engineers can develop the best network design for your customer.
  - **Account management.** Assistance with order-processing, local-loop pricing and network turn-up status.
  - **Pricing.** Network pricing assistance for non-standard applications.

- **Training.** A two-day training session delivered by our frame relay experts includes information about the technology, the industry, applications, pricing and competition.

Requirements

The WorldCom Frame Relay program requires that you:

- Qualify as a WorldCom or DSA customer.

- Sell WorldCom Frame Relay under an agent agreement with WorldCom. WorldCom provisions, maintains and bills your WorldCom Frame Relay customers; you are paid a commission.

- Sell frame relay under the WorldCom brand name.

- Qualify prospects for frame relay.

- Establish and maintain a "front line" relationship with the end user.

- Engage in sales of additional frame relay nodes.

- Designate a single point of contact (program manager) to interface with WorldCom personnel.

- Attend and successfully complete a two-day training class.

- Learn how to accurately price the network.

- Complete the appropriate paperwork.

1+Service
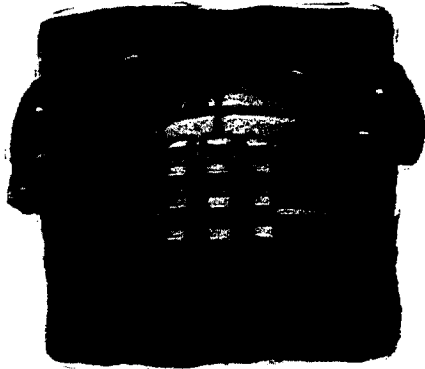
1+ Service is a fully integrated long distance service which provides end [...]
call origination and termination.

1+ Service provides a network access and transport platform which you [...] use [...]
design, bill and service your customers.

Switched-access locations are assigned to WorldCom's Carrier Identification Code
(CIC). 1+ Service is compatible with other market applications such as call centers
travel card platform providers and affinity market groups.

Features

- Worldwide termination to any direct-dialed telephone.
- End user's Automatic Number Identification (ANI) is "PIC'd" to WorldCom, i.e., traffic is automatically routed to the WorldCom network.
- US calls are billed in six-second increments, six-second minimum per call.
- International calls are billed in six-second increments, 30-second minimum per call.
- Primary Interexchange Carrier (PIC) status reporting, account activity reports and electronic order entry via the WorldCom Electronic Data Exchange (EDE).

- Hardware answer supervision: you are not billed for unanswered calls.
- Directory assistance.
- Term and volume discounts.

Options

- Call Detail Records (CDRs) available through various media, e.g., magnetic tape, CD ROM, electronic file.
- Daily, weekly and monthly frequencies.
- 1- to 8-digit account codes.